

REMARKS

Claims 1-32 are pending in this application. Applicant believes that in view of the remarks and amendments contained herein, claims 1-32 are in condition for allowance.

Independent claims 1, 8, 16, and 24 each recite “said embedded micro-controller monitors temperatures at a plurality of locations on the integrated circuit.” The Examiner has indicated that Shakkarwar teaches monitoring one or more temperatures at one or more locations. *See, for example*, Final Action paragraph 2. Applicant respectfully points out that Shakkarwar does not teach at least limitation mentioned above. Instead, Shakkarwar teaches only a single thermal sensor 107, “used to adjust the operational voltage or operating rate of the integrated circuit or to assess the response of the integrated circuit to test vectors.” *See* Shakkarwar col. 4 lines 20-23; Fig. 1., 107. Therefore, at best, Shakkarwar could only monitor temperature at a single location. As such, Shakkarwar fails to teach monitoring temperatures at a plurality of locations on the integrated circuit as recited in the claims.

Claims 2-3, 9-13, 17-21, and 25-27 depend from claims 1, 8, 16 and 24 respectively, and inherit all the limitations of the claims from which they depend. Additionally, each of claims 2-3, 9-13, 17-21, and 25-27 further set forth limitations not taught by Shakkarwar. Applicant respectfully assert that claims 2-3, 9-13, 17-21, and 25-27 are allowable at least for the reasons set forth above with respect to claims 1, 8, 16, and 24.

New claims 29-32 inherit the limitations of claims 1, 8, 16, and 24 and are therefore patentable at least for the reasons set forth above with respect to claims 1, 8, 16, and 24. Also, claim 29-32 recite said embedded micro-controller detects a difference in temperatures between said plurality of locations on the integrated circuit and redistributes workload in response to said temperature difference. As discussed above, Shakkarwar teaches only a single thermal sensor; and, could only detect temperature at a single location. Moreover, Shakkarwar is wholly silent as to the redistribution of workload. Therefore, Shakkarwar also fails to teach this limitation of claims 29-32.

Applicant further points out that the other references cited by the Examiner, namely Rogenmoser and Kim, fail to teach or suggest the limitations discussed above. As mentioned, independent claims 1, 8, 16, and 24 each recite “said embedded micro-controller

monitors temperatures at a plurality of locations on the integrated circuit.” And, new claims 29-32 recite said embedded micro-controller detects a difference in temperatures between said plurality of locations on the integrated circuit and redistributes workload in response to said temperature difference. Rogenmoser does not mention temperature at all. Also, Kim is silent to monitoring temperature at a plurality of locations. Therefore, the Examiner’s cited references fail to teach or suggest at least these limitations of the pending claims.

Conclusion

In view of the above, Applicant believes the pending application is in condition for allowance. Applicant believes no additional fee is due with this response other than the fees addressed in the accompanying transmittal documents. However, if an additional fee is due, please charge our Deposit Account No. 08-2025, under Order No. 200208727-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as Express Mail, Airbill No. EV568255648US in an envelope addressed to: MS RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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